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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Seung June Yi

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EXAMINER

GEORGEWILL, OPIRIBO

ART UNIT

PAPER NUMBER

2617

NOTIFICATION DATE

DELIVERY MODE

07/22/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/664,550	Applicant(s) YI ET AL.	
	Examiner OPIRIBO GEORGEWILL	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 77,80-82,86 and 89-91 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 77,80-82,86 and 89-91 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/18/2010 has been entered.

Response to Arguments

2. Applicant's arguments filed 6/18/2010 have been fully considered but they are not persuasive.
3. Applicant argues on page 8 of the combination of references of Beckmann (US 20030035423 A1), LG ("RAN considerations on MBMS", TSG-RAN Working Group 2 Meeting #30), Sarkkinen (US 20030211855 A1), and 3GPP ("Universal Mobile Telecommunication System (UMTS); Medium Access Control (MAC) protocol specification (3GPP TS 25.321 version 5.1.0 Release 5)) fail to teach the second identifier is a Multimedia Broadcast/Multicast Service (MBMS) identifier configured by a Radio Resources Control (RRC) layer.
4. Examiner respectfully disagrees with Applicant since, Beckmann clearly discloses a first identifier and second identifier (paragraphs [52], [53]) and in combination with LG, a second identifier which is an identifier from which the

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multicast group can be identified, is the MBMS RNTI. The second identifier is added to the MAC PDU and 3GPP discloses that the RRC configures the MAC PDU (see 3GPP page 31, 10 (b)). Therefore, the cited references indeed disclose that the second identifier is a Multimedia Broadcast/Multicast Service (MBMS) identifier configured by a RRC layer.

5. Applicant argues in page 9, that Sarkkinen does not disclose a transport channel
6. Examiner respectfully disagrees with Applicant since, Sarkkinen indeed discloses a transport channel (see paragraph [43], FACH, which is clearly a transport channel)
7. In view of the above, Examiner maintains rejection.

Specification

8. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required.
9. Claims 77 and 86 recite the limitation "wherein the MBMS identifier is configured by a Radio Resource Control (RRC) layer, but there is no antecedent basis for the claimed recitation in the specification as originally filed.
10. Claims 77 and 86 recite the limitation "and the first identifier and the second identifier are only utilized when the MTCH is mapped onto at least one transport channel.", but there is no antecedent basis for the claimed recitation in the specification as originally filed.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 77, 80-82, 86, 89 - 91 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re claims 77 and 86, the claims include the limitation "wherein the MBMS identifier is configured by a Radio Resource Control (RRC) layer", and Applicant has pointed to Fig 7 of the original specification as support for the limitation. Fig 7, shows the add m-RNTI (second identifier, ref 21) connected to MTCH which is connected to the RLC UM Entity and a MAC-control connected to the MAC-c/sh. There is clearly no RRC in said figure. Applicant argues that the "m-RNTI is generally received by a MAC-c/sh or control radio network controller (CRNC) or a UTRAN through a MAC control SAP and the MAC control SAP is connected to the RRC layer of the UTRAN". There is clearly no configuration in the figure and the specification discloses on page 5, line 15; page 8, lines 5 – 6; page 10, line 9 – page 11, line 5, an RRC with no mention of configuring the MBMS identifier. There also clearly no MAC control SAP connection to RRC layer in fig. 7 as

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originally filed, and a connection between the two entities cannot be taken to mean configuration of m-RNTI.

Re claim 77 and 86, the claims include the limitation "and the first identifier and the second identifier are only utilized when the MTCH is mapped onto at least one transport channel" and Applicant has pointed to FIG. 7, paragraphs [74], [119] and [120] as support for the added limitation. Applicant points to Paragraph [74] to show support for the first identifier, which states "Preferably, the logical channel identifier is a target channel type field (TCTF), and the **TCTF indicates whether a logical channel mapped to the common transport channel is a common logical channel or dedicated logical channel**. The logical channel identifier is added when the service data is transmitted from a medium access control (MAC) layer to a lower layer" (emphasis added). It is Applicant's assertion that the logical channel identifier is the first identifier. It is clear from Applicant disclosure paragraph [69], that there is more than one common logical channel, and as such any one of said common logical channels would have the logical channel identifier (first identifier). So the first identifier is not utilized only when the MTCH is mapped onto at least one transport channel. Furthermore, paragraph [68] discloses a logical channel being mapped to a transport channel and further in paragraph [69] disclosing various types of logical channels. Therefore, based on paragraphs [68] - [74], even if the logical channel is a dedicated logical channel, the disclosure has not precluded the channel from having a first identifier but rather suggested that it has one. And

as such, the disclosure has not taught or suggested that the first identifier is not utilized only when the MTCH is mapped onto at least one transport channel. Applicant points to paragraphs [119], [120] to teach the second identifier is used only when MTCH is mapped onto at least one transport channel. Paragraph [119] states in part " MTCH can be also used instead of CTCH" and paragraph [120] states in part "Upon receiving the RLC PDU through CTCH, an MAC-c/sh 20 adds the m-RNTI and a UE ID to the RLC PDU and performs TCTF multiplexing". It is applicant assertion that m-RNTI is the second identifier. It is however clear from paragraphs [69], [74], [119] and [120] that when a CTCH is mapped to a transport channel (as taught by applicant in paragraph [68]) the first identifier and the second identifiers also utilize. Examiner can not find any instance in the Applicant's original specification that support the recited limitation "and the first identifier and second identifier are only utilized when the MTCH is mapped onto at least one transport channel. Consequently, Examiner considers Applicant was not in possession of the claimed invention at the time of the filing date.

Re claims 80 – 82, 89 – 91 are rejected for being dependent on rejected claims 77 or 86.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (*See MPEP Ch. 2141*)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

14. Claims 77, 78, 80 – 82, 86 and 89 – 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beckman et al., US Pub No. 20030035423 A1 in view of LG Electronics Inc, “RAN considerations on MBMS”, TSG-RAN Working Group 2 Meeting #30, June, 2002 (henceforth “LG”) and further in view of Sarkkinen et al., US Pub No. 20030211855 A1 and 3GPP, “Universal Mobile Telecommunication System (UMTS); Medium Access Control (MAC) protocol specification (3GPP TS 25.321 version 5.1.0 Release 5), June 2006 (henceforth 3GPP).

Re claim **77**, Beckmann discloses a method for providing multicast service in a wireless communication system (see abstract), the method comprising mapping at least one logical channel onto a transport channel (paragraph [10], logical channel which is also projected (mapped) onto a transport channel) transmitting, to a user equipment (fig 3, ref MS), data of the at least one logical channel through the transport channel (paragraph [52], data which is sent over other logical channels can be sent over the same transport channel)

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wherein the data is added with a header including a first identifier for identifying the at least one logical channel and a second identifier for identifying the multicast service (fig 2, paragraph [52], TCTF field indicates from which type of logic channel; paragraph [53], MC-ID contains information by which the multicast group can be identified)

wherein the second identifier is an MBMS (Multimedia Broadcast/Multicast Service) identifier (paragraph [53], MC-ID contains information by which the multicast group can be identified)

Beckman is silent on the second identifier being used to distinguish between MBMS services. LG in analogous art discloses the RAN consideration on MBMS. LG further discloses an MBMS RNTI for MBMS multicast mode used to identify a group of UE receiving a multicast service (see LG sec 2.3, clearly shows that the group identifier is used to distinguish services). it would therefore have been obvious to a person having ordinary skills in the art, at the time the invention was made, to incorporate the teaching of LG into the disclosure of Beckman to have the second identifier being used to distinguish between services so as allow the UE Mac identify received MBMS data (LG: sec 2.3)

Beckmann in view of LG discloses the claimed invention including that data packets for multicast are transmitted over a combination already used or known in data transmission system from a logical channel which is projected onto a transport channel (Beckmann: paragraph [10]) but is silent on the at least one logical channel comprises a MBMS point to multipoint traffic channel (MTCH) and

the MTCH is mapped onto at least one transport channel. Sarkkinen in analogous art discloses a method for providing multicast service in a wireless communication system (see abstract, fig 1). Sarkkinen further discloses that the at least one logical channel comprises a MBMS point to multipoint traffic channel (MTCH) and being mapped onto at least one transport channel (paragraph [46], the Multicast Traffic Channel (MTCH) ... which may be a Forward Access Channel (FACH)). It would therefore have been obvious to a person having ordinary skills in the art, at the time of the invention, to incorporate the teaching of Sarkkinen into the disclosure of Beckmann, using the known combination of MTCH and FACH disclosed by Sarkkinen in the system disclosed by Beckmann so as to separate multicast and broadcast related control plane from the user plane.

Beckmann in view of LG and further in view of Sarkkinen discloses that the at least one logical channel is located between a Radio Link Control (RLC) layer and a Medium Access Control (MAC) layer (Beckmann: fig 1, clearly shows the logical channel between the RLC and MAC; Sarkkinen: fig1, ref 126) and the transport channel is located between the MAC layer and a physical (PHY) layer (Beckmann: fig 1; Sarkkinen: fig 1, ref 130).

Beckmann in view of LG and further in view of Sarkkinen discloses the claimed invention including that coupling of the MAC layer to the FACH in accordance with the 3GPP specifications (Sarkkinen: paragraph [46]) but is silent on the MAC layer comprising a plurality of MAC sub layers.

3GPP in analogous art discloses a UMTS system. 3GPP further discloses that the MAC layer comprises a plurality of MAC sub-layers (page 8, sec 4.2.1, MAC-b, -c/sh, -d). It would therefore have been obvious to a person having ordinary skills in the art, at the time of the invention, to incorporate the disclosure of 3GPP into the system of Beckmann in view of LG and further in view of Sarkkinen to have the MAC layer comprising a plurality of MAC sub-layers, so as to be in accordance with 3GPP specification (Sarkkinen: paragraph [46]).

Beckmann in view of LG and further in view of Sarkkinen and 3GPP discloses wherein each of the first identifier added by a MAC-c/sh that processes a common or shared data (3GPP: page 14, section 4.2.4.1, TCTF MUX)

wherein the MAC-c/sh layer further performs a scheduling function or a priority handling function (3GPP: page 14, section 4.2.4.1, scheduling)

Beckmann in view of LG and further in view of Sarkkinen and 3GPP discloses a second identifier (Beckmann: paragraph [53]), and LG discloses a new second identifier (sec 2.3). Since 3GPP handles RNTI in a similar way (page 23, CMAC-CONFIG-REG; page 24, section 8.3.2(a); page 28, UE-Id) and the UE id is added by the MAC-c/sh (page 14, section 4.2.4.1, IE id MUX) it would therefore be obvious to a person having ordinary skills in the art that the second identifier (MBMS RNTI) be added by the MAC-c/sh.

Beckmann in view of LG and further in view of Sarkkinen and 3GPP discloses wherein the first identifier is a Target Channel Type Field (TCTF) (Beckmann: fig

2, paragraph [51]) and the second identifier is a Multimedia Broadcast/Multicast Service Identifier (LG: section 2.3)

and wherein the MBMS identifier is configured by a Radio Resource Control (RRC) layer (3GPP: page 23, CMAC-CONFIG-Req; page 31, 10 (b), If the MAC entity receives a MAC PDU with a header inconsistent with the configuration received from RRC. Implying the RRC configures the MBMS identifier since it is clearly part of the MAC PDU)

and the first identifier and the second identifier are only utilized when the MTCH is mapped onto at least one transport channel (Beckmann: paragraphs [64] – [65], clearly shows the first identifier and second identifier only used when MTCH (see paragraph [10], already used or known in data transmission system from a logical channel which is also projected onto a transport channel FACH) is mapped to onto at least one transport channel.)

The rejection of claim 77 is incorporated herein. Claim 80, 81 depend on claim 77 and only further limitations will be addressed below.

Re claim **80**, Beckmann in view of LG and further in view of Sarkkinen and 3GPP discloses wherein the MBMS identifier is an m-RNTI (MBMS radio network temporary identifier) (LG: sec 2.3, MBMS RNTI)

Re claim **81**, Beckmann in view of LG and further in view of Sarkkinen and 3GPP discloses a third identifier for distinguishing a type of the second identifier included in the header (Beckmann: fig 2, ref IE-id type, since LG has modified to reference UEs).

The rejection of claim 81 is incorporated herein. Claim 82 depends on claim 81 and only further limitations will be addressed below.

Re claim **82**, Beckmann in view of LG and further in view of Sarkkinen and 3GPP discloses that the third identifier is a UE ID type (fig 2).

Re claim **86**, the claim is the receiving part of the transmission carried out in claim 77. Beckmann discloses the transmission and receiving of the data (fig 1, fig 4). Claim 86 is therefore rejected for the same essential reasons as claim 77 above.

Re claim **89**, as applied to claim 86 above, it is essentially similar to claim 80 and is rejected for the same reasons as above.

Re claim **90**, as applied to claim 86 above, it is essentially similar to claim 81 and is rejected for the same reasons as above.

Re claim **91**, as applied to claim 90 above, it is essentially similar to claim 82 and is rejected for the same reasons as above.

Contact Information

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OPIRIBO GEORGEWILL whose telephone number is (571)270-7926. The examiner can normally be reached on Monday through Thursday, 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis G. West can be reached on (571)272-7859. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OPIRIBO GEORGEWILL/
Examiner, Art Unit 2617

/Lewis G. West/
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